

Confederation of Swedish Enterprise

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ARTIFICIAL INTELLIGENCE (AI) AND ITS APPLICATIONS

The Confederation of Swedish Enterprise welcomes technological development, but adopts no preconceived ideas about its commercial usage. So called artificial intelligence is however an area where the applications thereof might come into conflict with sundry interests; ethical, social, technical and political etc. Therefore we would like to assess in advance where conflicts might arise, and in such cases assume basic positions that to the largest extent possible preserves the competitive power of business and industry.

BACKGROUND

"Digitalization" is a concept often used, but without a firm consensus on meaning. There is no legal definition. In everyday language the concept seems to be used as a kind of catch-all for the contemporary process of accelerated use of computerized methods to achieve certain defined objectives.

A special case of digitalization is the application of so-called artificial intelligence. Nor in this case is there any legal definition, and not even within the scientific and technological community does there appear to exist any complete agreement as to what exactly the concept entails. However, most often it seems to be used as a synonym for computer software that in some respects attains to, regarding end results and conclusions, that to a higher or lower degree mimic the end results or conclusions that could have been reached by a human individual. It is also commonly used for computerized systems being able to interact with humans in a way that mimics human interaction.

OUR BASIC POSITION ON LEGISLATION INFLUENCING THE CONDITIONS OF BUSINESS AND INDUSTRY

Large and thoroughgoing changes in society will inevitably create calls for legislation. All such regulation should however be based on a reasonable balance between opportunities and risks. For legislation to be fully fit for purpose it needs to be based on empirical knowledge, and that can often only be attained in retrospect. History gives examples of new technical or social ideas being embraced by mankind, in retrospect having being unnecessarily hampered by excessive caution. Against that background legislation influencing the conditions and conduct of business and industry should take the following as points of departure.

- *Business and industry has had the opportunity to self-regulate, but failed.*
- *Considerable public interests are endangered.*
- *There exists a so-called market failure.*
- *Existing legislation must be used to the largest extent possible.*
- *The legislation must be based on principles and be technology neutral.*
- *The legislation should as far as possible be compatible with the world outside our own jurisdiction. Internationally harmonized solutions should be sought.*

THE COMPUTER AND ITS APPLICATIONS IN THE FUTURE

Today's computers are digitally steered by human-produced software. The programming process has over time become increasingly sophisticated, and has been enhanced by the use of automated digital tools. The processes run by software have become faster, more relevant and more efficient. Through ongoing miniaturization, and a rapid expansion of data communications infrastructure, computerized sensors, calculation and steering units have become increasingly common.

It is to be assumed that we, in the not too distant future, will see applications of computer technology increasingly taking over tasks that could formerly only be performed by people. It is also to be assumed that these applications will be faster, cheaper and with results that, from a statistical point of view, are better and safer than those being attainable by human labour. If the development thus sketched is realized on a large scale there seems to be good reason to talk of a technological revolution.

So-called leaps of technology have, as far as we are able to judge, in general always led to considerable increases of economic productivity. Steam engines, Spinning Jennys, self-binders, agricultural tractors, electric engines, combustion engines, and computers – all and more examples of such leaps have in all known cases for some purposes led to a decrease in the demand for human labour, it being replaced by machinery. These leaps of technology have therefore led to a measure of unemployment and thus social unrest. Such problems have often been of a relatively temporary character, increased demand for human labour having arisen in other parts of the economy. We welcome technological progress. From a societal perspective there is sound reason not to dramatize what is happening in the area of digitalization.

One specific part of digital development needs to be observed in particular. That is the area of so-called artificial intelligence, AI.

Computers and their software have until recently been but machines with control devices, for their existence and functionality being totally dependent on human intercession. However, there are already computers and software that in their built-in

capacity to store, recognize, compute and deduct surpass all what any human could achieve. There is reason to surmise that man within the near future will be able to produce software having the capacity to change itself, that is re-program, without any human intervention whatsoever. Regardless of whether this functionality has been decided by human programming at the outset or not, the end results cannot be deduced beforehand. It already happens that the inventors of the algorithm (mathematical formula) running a computer program are unable to explain how the algorithm has reached a specific result.

In the not too distant future it is likely that so-called quantum computers will become available for practical purposes. Quantum computers will in many respects increase computing capacity exponentially from what is possible today. They will facilitate wholly new ways of using data and computers. In turn this will in all likelihood lead to a substantial increase in the number of AI applications.

The process commonly called digitalization will, with the applications of AI, most likely have great effects within a large number of areas of society. These effects will in turn engender economic, social, political and legal consequences. Our society as a whole will need to adapt to these consequences.

THE CONFEDERATION OF SWEDISH ENTERPRISE AND AI

Technological progress has from one time to another changed the preconditions of business and industry. Such progress can, once being done, not be undone, regardless of whatever viewpoint one takes on it. Basic changes in the preconditions of business have always led to some conflict; between and within companies, between business and the general public, between the general public and politicians etc. Applications of AI will undoubtedly entail such a profound change. Our confederation entertains a basically positive view of technological progress. But, we also have a responsibility to assess possible societal conflicts arising therefrom and try to shape a principled position that in the long run is deemed to be the most favourable to the conduct of free enterprise and a market economy, and thereby being able to establish, own, run and develop private businesses.

Applications of AI will in many areas be of great benefit to humanity. They will enhance medical diagnostics and treatment, create greater efficiency in energy consumption, increase safety in road traffic and enable more cost-efficient and less energy consuming transport systems, as well as improving the possibilities of education and human interaction. But they will also offer the possibilities to create more destructive military systems and more advanced criminal activity. What foremost concerns us, as a representative of business and industry, are the spheres wherein applications of AI could be expected to cause societal conflicts of interest. Such conflicts could lead to

political measures threatening to circumscribe free enterprise and the market economy. We judge the following areas at greatest risk of conflict.

The labour market. AI-applications could eventually cause redundancy in a number of professions. This could in turn lead to social unrest, demands for changes of collective work-wage agreements and insurance schemes (both private and public), demands for tax increases to meet unemployment and the need for re-training, demands for special taxation of “computers” or “robots”, demands for the prohibition of certain applications of AI, etc.

Robotization. Self-driving vehicles and automated systems for decision making will in all likelihood cause damage of various kinds. No technology is infallible. Even if it were possible to prove statistically that human drivers and human decision makers would cause more numerous and more serious accidents, that would be unlikely to sway public opinion away from a negative view of robotization as such.

Personal integrity. AI-applications, especially in conjunction with networks, can create an almost complete profile on a private individual; both concerning genetics and medical history, education and training, intelligence and knowledge level, personal economy, possible crime record, geographic patterns of movement, as well as personal preferences in every regard including political views and sexual inclinations etc. This can create a huge potential for abuse. The makers of AI-systems (eventually perhaps even the AI-systems autonomously) will be able to psychologically influence individuals in a certain direction who they themselves might otherwise not have chosen. Attacks on personal integrity for purposes of publicity could become more easy to perform. Political power might want to use AI-systems to control or influence the public or individuals. Even if such applications would break current national or EU-legislation one cannot rule out that they could be used.

Autonomous AI-systems in general. When software able to re-program itself has been developed, and thus being able to in whole or part do away with the intentions of the human programmers, unforeseen consequences entailing different forms of damage are likely to ensue.

Against this background the Confederation of Swedish Enterprise intends to assume the following posture.

- The labour market:

Time and again ideas appear about trying to steer development of AI so that it will not negatively influence present employment. Such thoughts often take the shape of government intervention meant to make the application of robots or AI more expensive. Any such attempts are doomed to ultimate failure, and will in effect only diminish the competitive power of European business and industry in relation to the rest of the World. We therefore categorically reject specific taxation of software, computers, robots and AI-applications.

Attempts at influencing collective work-wage agreements on national or EU level, for the purpose of lessening employment or income problems due to AI-applications, cannot be excluded. From the Swedish point of view it is imperative to guard the autonomy of the social partners.

We therefore categorically reject any government or EU intervention regarding collectively agreed insurance schemes.

AI-applications will demand new and changed skills in the labour force. Companies will not of themselves be able to give people basic training and education. They can only be assumed to take responsibility for introduction and further training concerning their own specific applications of technology. A re-arrangement of the Swedish national education and training system meant to meet this technological challenge in good time is therefore of the essence.

The Government must therefore be induced to change current education and re-training schemes making them compatible with the new situation.

All legislation ought to be technology neutral. However, political attempts to lead societal development in certain directions, by making laws specifically for one or the other technology, are many and varied. These attempts are as often as not guided by ideology, but they often fail and are to boot almost always economically counterproductive.

Therefore, legislation prohibiting certain AI-applications can only be accepted if it is balanced *and* concerned with the integrity of physical or legal persons, *alternatively* aims to counter tangible threats against human life or health.

- Robotization:

We predict that there will be many different kinds of autonomous systems in the future that interact with people or other machines. It is likely that personal or material damage sometimes will occur, due to malfunction of, or limitations in, such autonomous systems. Any legislation pertaining to such incidents must, as far as possible, be designed to make clear where personal and/or economic responsibility rests for injury or damage.

The area now seemingly at the forefront of technological development concerns so-called self-driving vehicles. Both in this and other areas where questions of responsibility – legal and economic – need to be clarified it is very important not to unnecessarily thwart technological development by attempts at designing wholly new legislation from the ground up.

Therefore, as the case may be, already existing legislation pertaining to insurance and legal responsibilities should be used as a template.

Public opinion is expected to assume a considerably more critical attitude towards autonomous systems than the correspondent ones today managed by

people. That nobody could be made responsible for malfunctions or injury due to the use of autonomous systems will not be accepted.

Therefore there must always be a physical or legal person in the present sense that can be held accountable for malfunction causing damage or injury.

From the viewpoint of both business and the general public it is of great importance to be able to identify sources of failure in autonomous systems, both regarding legal and economic responsibilities as for the purpose of preventing further mishap.

Therefore, programming, algorithms and machines must, as far as feasible, be designed to make it possible to re-construct a sequence of events and ascertaining sources of error behindhand.

- Personal integrity:

Personal integrity is a basic right within the EU. Anything concerned with the integrity of individuals or groups of individuals can be assumed to cause controversy in one way or another.

We therefore accept all legislation protecting personal integrity as far as it is balanced in relation to the protected interest in question.

Different applications of AI-systems will make it possible to systematically and undetected influence the preferences of individuals in a variety of ways. Such applications will sometimes border the area of pure advertisement. Proposed legislation against the design or use of such systems is something this Confederation will need to address in the future. However, it is not now possible to assess what our position would be in a specific case. Regardless, we would not endorse the use of such systems by public authorities.

We categorically reject legislation that would make it possible for public authorities to directly or indirectly influence the personal preferences of individuals through the use of AI-systems.

The use of autonomous systems will to a high degree lead to people interacting with such. To avoid sources of conflict it is important that an individual can know whether or not interaction is taking place with another individual or with a machine.

We therefore accept that legal demand is made for making it clear to people that they are communicating with a machine mimicking human behaviour.

- Autonomous AI-systems in general:

A physical or legal person in the present legal sense must always be available to be held to account for malfunction or injury resulting from the use of AI-systems. From some quarters it has sometimes been argued that so-called

intelligent systems ought to be given the same rights and obligations now resting with legal, or even physical, persons. Both from an ethical, practical och legal standpoint such a choice is bound up with such a plethora of problems that it can be dismissed out of hand for the time being.

We therefore categorically reject any idea about giving AI-systems legal personality.

Applications of autonomous systems will in all likelihood lead to both physical injury and material damage. From time to time it will become necessary to close down such systems for maintenance and rectification of malfunctions or limitations.

AI-systems must be designed in such a way that they can be shut down.

Autonomous systems will eventually become a part of everyday life. They will be of great practical help, and in the long run be perceived as indispensable, at least in the psychological sense. There is however a risk that functioning autonomous systems are taken for granted, and that for reasons of economy or lack of foresight planning is not made for the case of them ceasing to function. The functionality upheld by autonomous systems must therefore, in cases where human life and health is at stake, be made redundant – there needs to be emergency procedures in case of a shut-down able to function independently of the autonomous system.

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